

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

23 FEB 2005

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number
WO 2004/017972 A1

(51) International Patent Classification⁷: **A61K 31/47** SD, SE, SG, SK, SI, SY, TJ, TM, TN, TR, TF, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/US2003/025896

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date: 19 August 2003 (19.08.2003)

(25) Filing Language: English

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i)) for all designations
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

(30) Priority Data:
60/405,301 23 August 2002 (23.08.2002) US

Published:

- with international search report

(71) Applicant and
(72) Inventor: LAW, Peter, K. [US/CA]; 115 Glenarden Crescent, Richmond Hill, Ontario L4B 1L1 (CA).

(48) Date of publication of this corrected version:
24 March 2005

(74) Agents: MOTSENBOCKER, MARVIN A et al.; HELLER EHRMAN WHITE & MCAULIFFE LLP, 1666 K Street, N.W., Suite 300, Washington, DC 20006-1228 (US).

(15) Information about Correction:
see PCT Gazette No. 12/2005 of 24 March 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PII, PL, PT, RO, RU, SC,

WO 2004/017972 A1

(54) Title: BIOLOGIC SKIN REPAIR AND ENHANCEMENT

(57) **Abstract:** Muscle cell materials and methods are provided for refurbishing skin. Skin surfaces are prepared by removing dead cells and myoblasts are added in a cell-nutritive solution. An embodiment provides autologous human myoblast cells from the individual to be treated, serum from the individual, and an angiogenesis factor for stimulation of vascularization. Large 6 chondroitin sulfate may be used for controlled rapid cell fusion of the myoblasts. Foreskin fibroblast cell suspensions also may be used singly or in combination with myoblasts. In yet another embodiment non-immunogenic cells from another animal such as a pig with a double knockout mutation that affects foreign recognition may be added to cell surfaces.